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# A New Element of National Security: Military Forces in Environmental Protection

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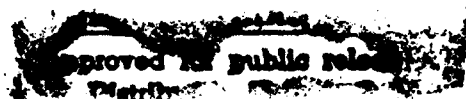
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### **ABSTRACT**

This paper recommends an expanded role for the military as an element of national security. Alternative uses of military capabilities in a non-cold war scenario can provide multiple benefits for both the military and the environment, i.e. natural resources. This role may provide greater public support for a larger and more stable military organization than would otherwise be supported by a more traditional, purely military, paradigm. Military applications and funding arrangements are depicted for rational applications of basic functions such as mobilization, intelligence, and personnel strengths. A decision making matrix depicting the interaction between the potential for conflict and the degree of impact is shown as the basis for employing military resources in environmental protection.

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# **A New Element of National Security: Military Forces in Environmental Protection**

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A NEW ELEMENT OF NATIONAL SECURITY:  
MILITARY FORCES IN ENVIRONMENTAL PROTECTION

INTRODUCTION

January 15, 1994...A Mexican owned offshore oil drilling platform exploded today, sending thousands of gallons of crude oil into the Gulf of Mexico. Due to the limited capabilities of the company who owns the platform, identified as PEMEX, the President has asked that U.S. military forces be used to assist in this disaster. When explaining the rationale for this decision, the President indicated that the potential threat to the U.S. environment and economy was enormous, "...an impact we cannot tolerate."

Already, top secret satellite data was providing disaster coordination teams with high resolution pictures, not only tracking the spill, but providing a wide range of data not previously known to exist. Naval warships have also been sent to provide onsite assistance to PEMEX. SEAL teams have been sent to provide underwater explosive guidance in an effort to stem the flow of oil into the Gulf. Air Force C-141 cargo aircraft are coordinating all airlift requirements for the movement of workers and needed equipment.

The President expressed deep concerns that this oil spill could cause grave damage to this country's economic growth

at a time when we are finally seeing an upswing. In addition, the oil spill has the potential to foul several salt water desalination plants along the Texas coast.

Non-traditional roles for the military are becoming more and more a reality. This paper will address the issue of environmental protection as a necessary element of national security, an element for which military action could be a real alternative.

The recent break-up of the Soviet Union, the demise of a forty year threat, has re-kindled many arguments about the role of the military in a "peacetime" scenario.

Current military strategies<sup>1</sup> have explicitly stated alternatives roles for the military, but

the context has been limited

to highly visible political

ventures such as combatting

drugs to more humanitarian

efforts such as disaster

relief "both at home and

abroad<sup>2</sup>. Drug use in the U.S.

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The fundamental objective of America's armed forces will remain constant: to deter aggression and, should deterrence fail, to defend the nation's vital interests against any potential foe. "National Military Strategy of the United States, January 1992"

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and the perceived social ills provide the rationale for such a

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<sup>1</sup> The "National Military Strategy of the United States, January 1992, explicitly includes military forces for combatting drugs and humanitarian assistance in addition to traditional military roles.

<sup>2</sup> Ibid. p.15

military role, i.e., drugs are considered a threat to national interests and hence security. While environmental issues are not currently perceived as a threat to U.S. national security as are drugs, it is easy to imagine a situation where our security would be and could be threatened by adverse environmental actions of other countries.

Does the military have a role in resolving or addressing these environmental issues? If so, what are the dimensions of the role? What are the benefits to the nation? Benefits to the military? Under what conditions would we decide to use the military? These are a few of questions I will address in this paper. I contend that military forces can and should be used for environmental protection, both domestically and internationally, and that both the nation and the military can benefit from such a new role.

In this paper, I will not discuss the environmental aspects of U.S. military bases or facilities, but rather the focus is on the larger issue of global environmental issues which overlap political boundaries. It is the overlapping of boundaries and impacts from environmental degradation which could conflict with our national interests and hence, our national security.

#### **Environmental Conflict is Real**

There are numerous examples of conflict between nations over



environmental issues. Mexico's failure to adopt dolphin-safe fishing methods led to a court sanctioned U.S. embargo of Mexican tuna for the last two years. Another example is the nearly complete Gabčíkovo Dam across the Danube River between Hungary and Slovakia. While the Hungarians abandoned the joint project, the Slovaks pressed the project on, damaging wetlands and altering agricultural lands in Hungary. Many Hungarians are angry that the historical border has been altered and that further boundary changes inevitable.

Whale hunting has long been a source of irritation between environmentally oriented countries and countries which hunt and use the whale as a food source.<sup>3</sup> While there were other elements involved, such as economics in all these instances, the primary issue still remains.

**Environmental degradation leads to conflicts among states over food, water, land, and population migration.**

#### **THE THREAT TO NATIONAL SECURITY**

The United Nations conference on Environment and Development held in Rio De Janeiro, June 1992, resulted in two treaties to address global warming and bio-diversity issues. Even though the

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<sup>3</sup> Most recently, Iceland has withdrawn from U.N. maritime agreements which eliminated the harvest of certain species of whale in order to restore a culturally and historically important industry.

U.S. refused to sign the latter treaty, and even though the global warming treaty was mostly a guidelines for reducing gas emissions, this conference represents an emerging trend to reverse past degradation practices. More interesting is the fact that 150 countries did sign the treaties in an effort to focus attention on the many problems that are at the forefront of world interest. Inherent within the framework of the conference, the rift between industrial, more developed countries, imposing environmental protectionism on third world, developing countries was addressed<sup>4</sup>.

I define environment as the sum total of hydrosphere, biosphere, and lithosphere components on the planet. The main issues referenced below are but a few of the many that could potentially affect our national interests and security.

1. Global warming - In addition to large build-ups of gases such as carbon dioxide which trap radiant heat, there are many other practices that could adversely impact the average global temperatures. Temperature changes in themselves are not deleterious, but the accompanying affects are projected to change world-wide agricultural production, drowning of coastal urban

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<sup>4</sup> One potential solution offered was for those industrial nations which value certain environmental resources to confer economic benefits on access to genetic resources to those countries being exploited, royalties for future, unknown resources. This mechanism would deter degradation of natural resources within a country while allowing for some level of economic development.

areas, vegetative habitat and wildlife changes.

2. Ozone depletion - The effect of chloro-fluorocarbons (CFC's) has been linked to the depletion of the ozone layer in the earth's atmosphere, increasing the likelihood of skin cancer by a factor of ten or more. How many citizens will become cancer casualties due to the continued use of

CFC's in third world nations before action is advocated?

3. Deforestation - In addition to Brazilian rain forests, logging activity throughout southeast Asia is occurring on such a scale as to create a multitude of negative environmental impacts including the alteration of rainfall patterns, global temperature changes, wildlife extinction, loss of many potentially beneficial (medicinally) plants, and serious degradation of water supplies.

4. Global pollution - The industrial nations of the world are adding large amounts of chemicals used in manufacturing and agriculture to the world's waterways and large amounts of environmentally harmful gases into the atmosphere. The long term effects could be devastating to the world's supply of fish and other marine food chains. Developing nations are adding to the problem as they increase their economic activity while seriously

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#### Our National Interests

- Survival...as a free and independent nation  
...fundamental values intact...people secure
  - Healthy and growing economy...for national endeavors  
at home and abroad
  - Healthy, cooperative, and politically vigorous relations with allies and friendly nations
  - A stable and secure world, where political and economic freedom flourish...
-

degrading their own natural resources and reducing long term productivity.

Oil spills are virtually epidemic through-out the world. As oil exploration and the subsequent drilling in off-shore settings increases, the potential for more pollution increases.

While these threats do not seem as ominous or needing immediate attention as the overthrow of a legitimate government, the long term threat to our national and international security may be greater and more enduring than any political or social instability experienced to date. The long term effects of dumping of nuclear waste into the North Sea by the former Soviet Union has not as yet been assessed. The impacts to fish supplies, and other species in the food chain, could prove to be the next Chernobyl incident.

Military strategy for the 1990's and for the future must include environmental protection as an element. Inclusion need not be made solely for environmental preservation's sake.

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The fundamental objective of America's armed forces will remain constant: to deter aggression and, should deterrence fail, to defend the nation's vital interests against any potential foe. "National Military Strategy of the United States, January 1992"

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Environmental protection could be an operable component of military strategy, preserving military funding and capabilities

in peacetime. Environmental protection as an element of military strategy can also serve as an alternative mechanism for maintaining military force and presence in other parts of the world.

#### **MILITARY CAPABILITIES IN ENVIRONMENTAL PROTECTION**

The U.S. military has enormous resources that could be used in a variety of ways to assist in environmental protection:

- Logistical: military prowess for logistical support has been demonstrated in war and in peace. Most recently, the military created tent cities for victims of Hurricane Andrew, providing shelter and food for thousands of people in a very short time frame. Using this capability in another way, rapid movement of materials, transportation (air, land, and sea) is essential for oil spill containment and clean-up.

- Equipment: bulldozers, backhoes, graders, equipment of all sorts provides a built-in reserve of tools for many uses such as site preparation for reforestation projects, reservoir construction and other wetland development projects, habitat alteration<sup>5</sup>.

- Personnel: trained personnel for a variety of jobs...engineers, medical personnel, laborers, administration. The principle advocated here is that these military resources

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<sup>5</sup> Habitat alteration can be either the building of habitat such as nesting and denning sites or using equipment to create a specific vegetative type such as grasslands, low density forests, etc.

exist now and could be used effectively for many other purposes for little additional cost in the short run, thereby reducing the potential for huge future costs and associated threat to national security.

The idea of using military forces for traditionally non-military uses is a logical construct considering the inherently non-traditional capabilities of military organizations.

### **Practical Considerations**

In addition to the more pragmatic consideration of capability alone, there are three other dimensions that should be examined:

1. Political
2. Economic
3. Social

Why would we want to use military forces? Why not use private or civilian resources? Regardless of the results of downsizing our military for a peacetime role, a sizable organization will still remain in place. The basic cost of the soldier, marine, sailor, etc. and the accompanying resources has been paid. As long as financial resources and government spending is constrained, alternative uses of military resources makes sound economic sense. In addition, alternative uses of the military could serve to enhance the public's positive perception of military resources and their willingness to finance them during so-called periods of peace. Later in this paper I address the issue of financing

military resources used for environmental protection, the benefits of which also discussed.

DOD has an environmental policy, but it is internally directed and fails to recognize opportunities that military capability can and should exert as an extension of U.S. national interest<sup>6</sup>.

There are distinct benefits for a nation using military resources that enhance the political, economic, and social well being of our nation.

**Political** - Mingling of military and private citizens has benefits for both. The military creates good-will and support for themselves while the citizens come to realize the more human side of military forces. Good will towards the military could unify nation resolve to seriously address a host of related problems.

**Economic** - Given the limited budgetary resources of any nation and given the existence of resources dedicated for a military organization(s), better use of military resources for national issues is cost effective and makes good fiscal sense. The

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<sup>6</sup> DOD has engaged in a number of land stewardship efforts, such as cooperating with the U.S. Fish and Wildlife Service to implement the North American Waterfowl Management Plan Cooperative Agreement, but only on DOD owned properties such as large military bases in the mid-west. "Annual Report to the President and the Congress," February 1992.

negative side of utilizing military forces (or any other governmental resource) is that growth in civilian employment would be limited because fewer private sector jobs would be created. For example, the Alaskan oil spill of 1988 generated thousands of temporary, high wage jobs cleaning up the oil spill. While the long term benefits can be argued, the benefits of private sector employment regardless of duration are obvious and undeniable. If the military had used their personnel for the same job, the economic multiplier would have been substantially less. However, the pay-off to the military may have been positive in terms of training for future events in which adversarial countries might use oil spills as weapons designed to drain our treasury to stave off the environmental impacts.

**Social** - Public concern over the environment has been steadily growing as new information concerning global warming, and the effects of increasing ozone holes flashes across the media. Although the current administration may change past trends, funding for environmental issues has not enjoyed the same rate of growth as has concern. Pollution by third world countries is another example where economics and the will to clean up the environment do not match. How people think about the future is an important aspect which should not go un-ignored.

Unfortunately the social impacts of environmental issues often suffer from inaction until there is a crisis. There are many



examples of this in our own country. For example, leaching of heavy metals from defunct mines in Colorado into drinking water supplies did not cause a stir until there was wide spread understanding of the potential negative impacts to an entire population, present and future.

The economic system has not helped the decision making process to address this sort of problem. Most economic analyses fail to consider externalities<sup>7</sup> which are not only difficult to value, but when valued are so subjective that they do not lead to solutions. Undeniably the social cost is great. The polity wants action! Call in the Marines! Utilization of military resources could address issues where economics and political institutions have failed to move on these important problems facing an ever increasing population.

#### **POTENTIAL APPLICATIONS**

The military has been used for a variety of traditional non-military applications over the past 200 years. The most common application has been for occasions of domestic disaster such as hurricane relief, civil unrest, etc. Internationally, the military has been used for logistical relief, moving foodstuffs

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<sup>7</sup> Externalities as used here refers to effects of actions which cannot or have not been assigned values and costs in the monetary sense. This does not imply they are not important, but their assignation is difficult and often extremely subjective. For example, the cost of loosing a species of wildlife is nearly impossible using conventional economic techniques and seldom serves any useful purpose.

into drought stricken countries of Africa or earthquake struck areas such as Albania and Mexico. Most recently drug interdiction has resurfaced as a use of military resources.

Military troops have been actively used for forest firefighting, providing personnel, logistical support, as well as aerial fire retardant aircraft<sup>8</sup>. This application received considerable media attention in 1987 when conflagrations burned hundreds of thousands of National Forest lands in California.

What are the potential applications of military forces in the environment? A few of the more obvious applications are:

1. **Monitoring** - Photo-reconnaissance, satellite
2. **Patrolling** - Ships, aircraft actively sampling water, air
3. **Direct Clean-Up** - Idle troops focused on specific jobs
4. **Logistical Support** - Use of equipment, airlift, sealift
5. **Direct Intervention** - Physical presence to stop impacts

Given the number of personnel, diversity of skills, and logistical capability, the opportunities are endless! Oil spills could be quickly detected using the latest satellite systems

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<sup>8</sup> The Forest Service, U.S.D.A., under provisions of a cooperative agreement, provide training and funding for maintenance of 6 C-130 aircraft fitted with fire retardant chemical tanks. Dubbed MAFFS (modular aviation fire fighting system), these aircraft can be quickly fitted with tanks for periods of severe fire activity to augment the F.S. contracted fleet of 34 airtankers.

instead of detecting missile launches from the former USSR. Naval vessels could utilize their capabilities to contain spills. Military forces could be utilized for wetland development, using their use of explosive technology for "pothole"<sup>9</sup> creation, a key element for nesting waterfowl. These applications replace weapons with tools. The benefit for the military is to retain people and resources in an active condition as opposed to a storage condition. One of the current national security strategies relies on "reconstitution " of forces in response to security threats. Alternative uses of the military as proposed here may reduce the start up time and shorten the gap of operability.

Are there other applications?

What happens when another country's environmental degradation affects us? What happens when diplomacy fails to reach an accord? Is the use of military legitimate in

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"As the security of others also contributes to the one's own security, helping to build a stable eco-system in others, nationally and locally,...through international cooperation, promotes general security." Galtung, p.100.

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this instance? The U.S. Constitution provides part of the generic answer to this question, ... "provide for the common Defence and general Welfare of the United States." If a nation

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<sup>9</sup> One technique for increasing waterfowl nesting habitat is to create islands and small ponds within traditionally marshy areas. This has been done with small dynamite charges, effectively blowing holes in a closed marsh.

so polluted the air or water as to imperil the welfare of the population, would military force be used to stop this threat to national health? There are situations that currently exist that could lead to this sort of scenario. If Brazil continues to cut all the rain forests and if the predictions are true, would we deploy military forces to physically stop this activity, thereby protect our population from a dramatic increase in skin cancer? An increase in global temperatures that result in massive flooding of our coastal cities? How much would we tolerate before a national consensus would demand action?

#### **INTERNATIONAL IMPLICATIONS AND CONCERNS**

It is clear that nations will fight for political, economic, and cultural values. At the international level, will societies become aggressive when other societies fail to respect the rules of a global, stable eco-system?

Alternative uses, i.e. non-traditional uses, of foreign military forces have been effectively utilized in Panama. Faced with similar financial shortfalls, the Sierra Club "bought" \$500,000 of Panama debt in exchange for \$50,000 and special designation of tropical forests as wilderness. The wilderness designation precludes logging and other aspects of industrial intrusion. In addition, military units have been de-activated and used as park rangers to maintain the wilderness status.

In countries which cannot logically or financially support large

military forces, alternative uses which also provide positive environmental results can be of benefit.

### **FINANCIAL SECURITY**

The World Bank recognizes the importance of environmental protection. Since 1986, the World Bank has systematically integrated environmental protection into the bank's mainstream of thought and considerations since continued environmental degradation threatens the Bank's main objectives...reducing poverty and supporting sustainable development.

National Environmental Action Plans (NEAPs) have been developed for 18 developing countries. While the obvious projects have been funded, reforestation, water developments, marine conservation, etc...how will these investments be protected from the very people who are being helped or other resource exploiting countries? The military not only has the resources to do this sort of project protection, but would receive funding from the World Bank to do it!<sup>10</sup>

### **WHEN SHOULD THE MILITARY BE USED?**

An assessment of conditions associated with an environmental impact must be an integral part of any long term strategy for

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<sup>10</sup> Environmental loans for \$12.4 million were made to Mauritius for establishment of a national park and maritime conservation. Funds for initial, establishment costs for protection would be a legitimate project cost. These funds could then be used to pay for military expenses to accomplish the work.

determining an appropriate response. Potential for conflict and degree of impact are factors that I will use to address this concept.

**A. Potential for Conflict** - This element addresses the issue of "who cares?" and "how much do they care?" The components are:

1. Proximity - The closer to our borders, the more interest there will be for action. Conversely, the more remote the impact or the more an impact is confined within relatively isolated political boundaries, the less interest.

2. Affected Parties - Often U.S. sympathies are aligned along cultural, religious, or historical affiliations. For example, environmental damage towards an ally is likely to garner more concern than one against a perennial adversary. While on the surface there would be superficial outcry if nuclear radiation caused large mortality in Japan, there would be an undercurrent of indifference or even morbid elation.

3. Intent - Most people can understand an accident and while there may be lots of anger and inflammatory rhetoric, calm analytical action (and maybe lawsuits!) follows the impact of the accident. On the other hand, deliberate fouling of one's water supply could easily break out into armed retribution.

B. **Degree of Impact** - This element addresses the issue of "how much damage?" Its components are:

1. Duration of Impact - An impact which lasts for a hundred years has more importance than one that lasts a week.

2. Degree of Mortality - Impacts that result in mass mortality are of greater concern than are ones which offend the view of a tourists.

3. Nature of Impact - Impacts which are readily identified and understood are far more likely to lead to reaction than those which are esoteric and not well understood. Water pollution causes far more concern than does loss of endangered wildlife species habitat. While everyone can identify with water, the same cannot be said of endangered species habitat.

One technique to combine these two elements is to assign arbitrary scores to each component within an element which can be added, resulting in a total score which can be used for comparative analysis. Comparisons with specific environmental issues/impacts using these two elements, potential for conflict and the degree of impact, could then be used to estimate the threshold of action, the point where a decision to use military forces could be reasonably considered based on the intersection of two variables.

#### A. Potential for Conflict

Far/Unimportant/Accident.....Near/VIP/Malicious<sup>11</sup>

1. Proximity.....1.....5.....10
2. Parties Affected.....1 .....5.....10
3. Intent .....1.....5.....10

#### B. Degree of Impact

Short/Low/Esoteric.....Long/High/Obvious

1. Duration.....1.....5.....10
2. Mortality.....1.....5.....10
3. Nature.....1.....5.....10

In this paper, I propose the interaction between the potential for conflict and the degree of impact implies a likely reaction that the U.S. would display given an environmental impact.

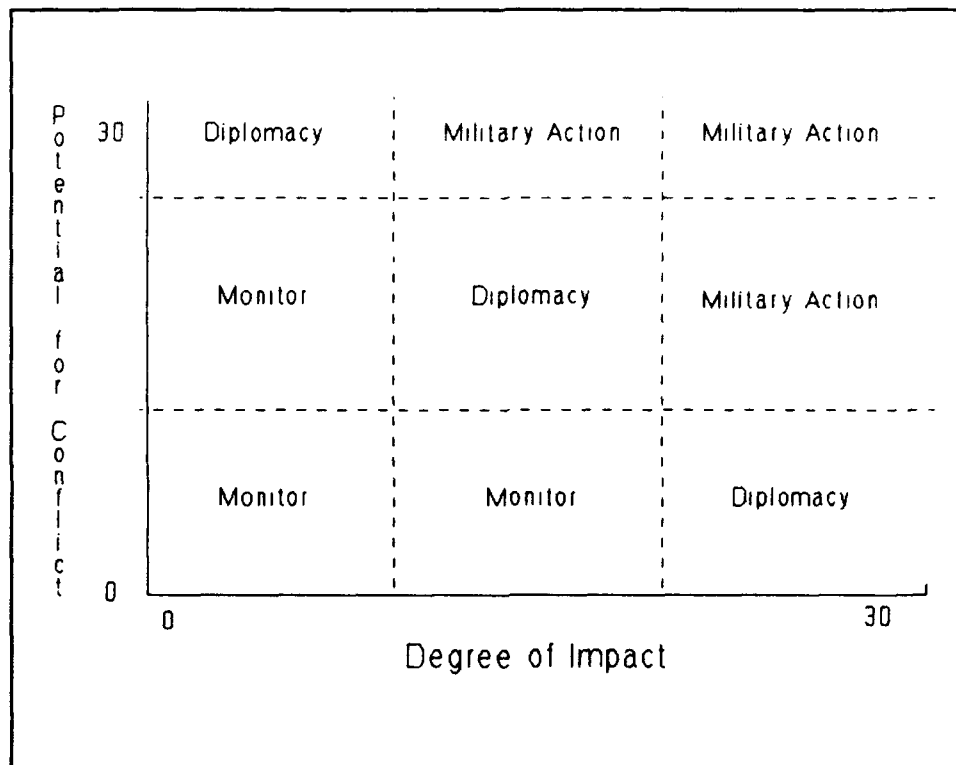
Figure 1 illustrates my point.

This matrix shows the possible reactions associated with any particular environmental event (negative impact). As both variables increase, there are three primary reactions that could be expected.

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<sup>11</sup> These adjectives and their interpretation would need significant definition in order to be practically useful. The score schema as well as the definition are for illustrative purposes.





**Figure 1** Matrix of Reactions Associated with the Potential for Conflict and Degree of Impact.

1. **Monitoring** - Observation, rhetoric, casual action, no intercourse between nations.
2. **Diplomacy** - Formal discussion between sovereign entities, technical assistance may be a feature. Political action may be intense. Embargoes, sanctions are possible.
3. **Military Action** - This involves direct intervention or direct assistance. Military assets would be taking part in the remedy or at the extreme, punishment. While Figure 1 implies a limited military option, i.e. only in events that have high potential for conflict and a high level of impact, it does not exclude instances where military resources could be beneficially used before the seriousness of an event becomes severe.

An example of the former situation is an event or impact which could cross into our country and which result in high mortality would most likely result in military action. Conversely, an environmental impact occurring within another countries' borders which only offends our sensibilities which result in monitoring and rhetoric.

An example where military could be used in a less severe situation might be when they are the closest and most capable resource, e.g. an oil spill in close proximity to a foreign military naval base. Our national credibility would be in danger if these resources were not used to assist in such an event.

Noticeably absent from the components is identification of the culprit and the willingness (or lack of willingness) of the culprit to take appropriate action. These last two factors may determine the basis for action or the degree of hostility involved.

The intersection of the two elements displayed in Figure 1 determine the basic question, "when should the military be considered."

The intersection of these two factors alone can be used to assess the degree to which the military should get involved. Scope of the project needs some consideration due to scale of operations

and the capabilities of a nation.

### **FINANCIAL CONSIDERATIONS: Who Pays?**

Once the basic premise to use military for environmental protection is an integral function of national security, the issue or question of "who will pay?" inevitably comes up. Just as important is the question, where will the funds come from? For any department operating under U.S. law, there are two main ways to get funds, regardless of purpose.

1. **Appropriation** - Funds are directly appropriated by Congress into the budget of the military for specific purposes such as environmental protection. This would require the military to explicitly define their role and mission in environmental protection.

a. Regular appropriation - Under this scenario, formal recognition of the military's role is specified within the national budget. This could be used to offset costs associated with defense related projects, such as mapping and monitoring systems could receive dual line funding<sup>12</sup> within the DoD appropriation.

b. Emergency or Supplemental appropriation - Within the DoD overall budget, funds are appropriated to cover unanticipated

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<sup>12</sup> Usually a system is funded by one budget line item (BLI) for a specified purpose. In this scenario, the cost is spread between two different purposes and two BLI's, traditional military and environmental protection. This overtly displays the secondary benefit, increasing the utility and scope of a controversial defense system by increasing its utility and scope to a wider public.

use of military resources for non-traditional tasks. This recognizes a legitimate role and provides nominal funding for budgeting purposes. Depending on the amount, this could reduce, albeit in a small amount, the total yearly defense needs.

2. **Reimbursement** - Funds are obtained from a variety of sources external to DoD.

a. Other Appropriations - In cases where the military completes tasks under the purview of other agencies, funds are transferred into the DoD account. The task itself is defined under some other appropriation, either in an emergency account or a regularly budgeted account.

b. External Organizations - Beyond the U.S. government are many organizations, including other governments, which could transfer funds into the DoD. For example, the World Bank<sup>13</sup> has great interest in funding measures which help to stabilize emerging countries. The military organization would establish a contract with the World Bank for a specific task, to the benefit of both.

### **VISION FOR THE FUTURE**

The entire concept of a national security component for environmental protection has many spin-off benefits that could redefine the role of the military in a warless world. The

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<sup>13</sup> The World Bank is an accepted nickname for the International Bank for Reconstruction and Development, IBRD. The IBRD was formed in 1944 to help stabilize developing countries by providing loans on "soft" financial terms, long payoff and no interest basis.

emphasis on non-military ventures could encourage many younger Americans to join as a public service. The idea of security would expand into arenas sorely in need of attention. Third world countries could better utilize their scant resources for their national benefits. Environmental protection could provide a stabilizing force for countries in search of a future.

Our own military could be redefined from a purely combative nature to one of a more international assistance role, not replacing organizations such as AID, but providing short term logistical capability in a moments notice. There is also an educational benefit for those military personnel who participate, much like the Peace Corps. Their single mission orientation could be expanded to a more diverse, perhaps relevant aspect of the post-cold war world.

Given the world's past history, war will be undoubtedly be fought over environmental issues just as it has over political and social issues. One nation so impacting another as to require force to stop the problem. While much of the action will be traditional, the termination of hostilities will require a new paradigm for long term peace.

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